

GOAL 3: Land Preservation and Restoration



Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

During FY 2004, EPA's waste management and emergency response programs worked with state, tribal, and local governments to implement and oversee 15 separate statutory authorities.¹ Many stakeholders—including non-governmental organizations, industry associations, and Federal Advisory Committee Act groups—assisted these efforts. Through these partnerships, the Agency met or exceeded all of its hazardous waste cleanup and prevention goals for FY 2004.

Four themes characterize EPA's land program activities under Goal 3: Revitalization; One Cleanup Program; Recycling, Waste Minimization, and Energy Recovery; and Homeland Security. The Agency's enforcement and research programs are essential elements common to all four themes. For example, private parties pay for and conduct most cleanups of contaminated sites. EPA's Superfund program has a longstanding "enforcement first" policy to pursue viable, responsible parties to pay for or carry out cleanups. At Resource Conservation and Recovery Act (RCRA) corrective action facilities, owners and operators conduct studies and perform cleanups. Because EPA's enforcement program provides leverage to encourage voluntary efforts, many private parties have undertaken cleanups without enforcement orders.

From 1986 through 2002, using innovative cleanup technologies resulted in an estimated net cost savings of \$2.7 billion and an average savings of 71 percent per site.

EPA's research helps to accelerate development of scientifically defensible, cost-effective waste management and remediation methods. EPA's Office of Research and Development contributed significantly to EPA's new guidance on remediating contaminated sediments² and continues to advise managers of large contaminated sediment cleanup projects. The Superfund Innovative

Technology Evaluation (SITE) program identifies, demonstrates, and assesses innovative and alternative environmental technologies and distributes information to developers, remediation site managers, and regulators, resulting in more efficient site characterization and remediation. From the SITE program's inception in

1986 through 2002, the use of innovative technologies to clean up contaminated sites has resulted in an estimated net cost savings of \$2.7 billion and an average savings of 71 percent per site.³

REVITALIZATION

EPA and its partners are restoring contaminated land to make it economically productive or available as green space. Like the Agency's Brownfields Program discussed under Goal 4, these revitalization efforts complement traditional cleanup programs and enable affected communities to reuse contaminated lands in beneficial ways.⁴

For example, restoring Michigan's Torch Lake, a former copper mining site of over 800 acres of slag, stamp sands, and other mine spoils, has increased plant diversity from 5 to 76 species and bird sightings from 0 to over 24 species. In FY 2004, EPA and Michigan Technological University instituted a unique program under which local area high schools continue to monitor birds, plants, and soil at Torch Lake. EPA is developing performance measures to assess its success in restoring and revitalizing sites under all of its cleanup programs.

EPA's partnership with the Wildlife Habitat Council (WHC), an organization of corporations and environmental groups that promotes ecological enhancement projects, has given rise to other innovative revitalization efforts. Projects are underway to improve habitat, restore native species, and forge stronger bonds between communities and their natural environments. In FY 2004, EPA challenged WHC companies to identify opportunities for enhancing the ecology of properties contaminated by hazardous waste by 2005, to design and initiate at least one project by 2006, and to address 10 percent of the remaining projects in each subsequent year.

PIPELINE RUPTURE IN FAIRFIELD, CALIFORNIA

In FY 2004, a pipeline rupture released approximately 95,000 gallons of diesel fuel into a marsh in Fairfield, California, contaminating the 220-acre area. Over 2 months, EPA combined traditional removal techniques and bioremediation to clean up the site. Removal activities are now complete; the marsh has been protected and returned to productive use.



ONE CLEANUP PROGRAM

Under its One Cleanup Program, EPA looks across all cleanup programs to increase consistency and enhance effectiveness. Using the One Cleanup Program approach, the Agency and its partners are streamlining existing programs to achieve greater efficiencies. For example, EPA is working with Arkansas and Oklahoma on a pilot project to streamline the RCRA corrective action process and promote flexible practical

Streamlining pilot saves an estimated 19 years in cleanup time and \$11.25 million in cleanup costs at five facilities.

approaches, while preserving the integrity of existing guidance and regulations. The pilot, which includes five facilities, thus far has saved an estimated 19 years in cleanup time and \$11.25 million in cleanup costs. In April 2004, EPA and Pennsylvania signed a One Cleanup Program memorandum of agreement to facilitate implementing the state's voluntary cleanup program. This agreement will leverage existing cleanup authorities, coordinate cleanup programs to promote sound and effective remedies, and maximize infrastructure development.⁵ In another case, a federal environmental work group was formed in November 2003 to discuss ways to improve cleanup at federal facilities by focusing on RCRA/CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) coordination, mine waste repositories, and lead Agency designation.⁶

The Agency's two major cleanup programs, Superfund and RCRA now rely on similar environmental indicators.⁷ In FY 2004, Superfund and RCRA cleanup programs met or exceeded annual and multi-year goals for human health environmental indicators and for groundwater protection environmental indicators. Eighty-three percent of Superfund sites (1,242 sites) and 84 percent of RCRA correction action

facilities (1440 facilities) met human health indicators, having adequately protective controls in place to prevent any unacceptable human exposure under current land and groundwater use. EPA's Superfund program met this human health goal in part by providing alternative drinking water to nearly 615,000 people at National Priority List (NPL) and non-NPL sites where available supplies were determined to be unsafe, and relocating over 45,000 people in instances where contamination posed the most severe, immediate threats to life and health. Sixty-seven percent of Superfund sites (875 sites) and 70 percent of RCRA corrective action facilities (1199 facilities) met groundwater protection indicators, having abated the migration of contaminated groundwater through engineered remedies or natural processes.

By the end of FY 2004, the Superfund program completed construction at 926 NPL sites, nearly 61 percent. 458 construction projects are continuing at 345 NPL sites (excluding federal facilities). Two-thirds of these projects (309) are led by Potentially Responsible Parties. As a result of Superfund's cleanups, 490 NPL sites now have land ready for reuse, and 300 of these are in use.

900TH SUPERFUND CONSTRUCTION COMPLETED

In FY 2004, EPA completed the 900th Superfund construction, at the Solitron Microwave Superfund site in Port Salerno, Florida. The developer who purchased the Solitron property plans to construct a 20-acre industrial park, which will provide 150,000 square feet of warehouse and light industrial space.



RECYCLING, WASTE MINIMIZATION, AND ENERGY RECOVERY



EPA's Resource Conservation Challenge (RCC) is a voluntary program that increases regulatory flexibility, promotes opportunities for converting waste to economically viable products,

and encourages resource conservation through efficient materials management. In FY 2004, EPA and the states initiated a strategic planning process based on five RCC program elements: product stewardship, beneficial use, energy conservation and recovery, priority chemicals, and greening the government. In March 2004, the RCC published its first annual report on the program's accomplishments and progress.⁸

The RCC's success is evident in a number of states. In North Carolina, EPA and the Land-of-Sky Regional Council's Waste Reduction Partners developed a model recycling market for used wooden pallets. The project demonstrated that unique, highly stylized flooring can be made from used pallet deck boards, and that a market exists for this material at prices that make the process economically viable for small private enterprises with wood processing expertise. In another project, EPA, Michigan, Ohio, Illinois, Indiana, New York, Pennsylvania, Connecticut, Alabama, and supporting private-sector organizations collaborated to inventory and map scrap tire piles, plan cleanups, set resource priorities, and develop a guidebook and training program on best practices for tire pile mitigation.

EPA's WasteWise program, another successful voluntary effort, promotes reductions in municipal solid waste and targeted industrial wastes. WasteWise participants design waste reduction programs tailored to their

own needs, benefiting both the environment and their bottom lines. Through WasteWise, the Fort Independence Reservation in California was awarded a 2004 Program Champion Award for developing and implementing an innovative solid waste management program. To date, the Tribe has recycled more than 1,200 pounds of glass, plastic, paper, cardboard, aluminum, and other materials. Further, by successfully



Preserving Resources,
Preventing Waste

encouraging community recycling and making arrangements with the local landfill, the tribe is generating enough money from the sale of these materials to fund the program.

HOMELAND SECURITY

EPA continues to improve its emergency preparedness and response capability, particularly in terms of homeland security. During FY 2004, EPA worked with its federal partners to enhance the incident command/unified command system across government and the private sector; deliver federal assistance to states at the Federal Emergency Management Agency's direction; and, as a member of the Catastrophic Disaster Response Group, develop national policy and guidance on response coordination and emergency support function issues.

In FY 2004, EPA reduced by 56 percent the deficit in core emergency response readiness, thus improving the Agency's capability for responding to multiple chemical, biological, and radiological incidents. EPA field responders and National Response System special forces received extensive response-related training: scientific and technical training for detecting, analyzing, and responding to chemical, biological, and radiological agents and training in managing incident command system responses. During

PLASTICS RECYCLING IN NEW HAMPSHIRE

Each year, nearly 200,000 tons of plastic are sent to landfills in New Hampshire alone. Disposal costs, excluding transportation, run about \$70 per ton. In 1998, EPA awarded \$141,000 to the New Hampshire Governor's Recycling Program to study the feasibility of developing a facility to recycle mixed plastics in northern New England. In June 2004, a new company—New Frontier Industries—was incorporated and began manufacturing and selling plastic highway sound barriers and lumber.



FY 2004, EPA first responders participated in more than 150 training exercises with their federal, state, and local counterparts.

Challenges and Directions for the Future

Cleanup and waste management programs faced several challenges in FY 2004 that affected activities under one or more of the Goal 3 themes. For example, the Superfund program faced a growing backlog of projects ready to begin construction, coupled with the challenge of funding several large and complex ongoing projects. During FY 2004, Superfund underwent a series of internal and external evaluations to explore this problem.⁹ As a result, the program has engaged in a public dialogue to identify and implement a series of reforms that will address these issues over the coming years.¹⁰ The Base Realignment and Closure (BRAC) program anticipates challenges in meeting requirements for existing bases and putting those facilities back into productive

reuse, while at the same time addressing a new round of BRAC sites to be announced in 2005.

Because MTBE (methyl tertiary-butyl ether) contamination and increased technical complexities make cleaning up remaining leaking underground storage tank (UST) sites particularly challenging, states are having greater difficulty meeting cleanup targets. As a result, the UST program may not meet its FY 2004 target of 21,000 cleanups. EPA recognizes that completing fewer cleanups extends the potential for environmental harm and delays restoration and reuse of contaminated sites. However, during the first half of FY 2004 the Agency and its partners were able to complete more than 8,000 cleanups,¹¹ reducing the backlog to 132,443, and are on track for reducing the UST cleanup backlog by 50 percent by 2008.

In FY 2004, the UST program began a review to improve measurement of environmental and public health outcomes of tank cleanups. Findings are expected by December 2004. In addition, the program is exploring methodologies for setting its current cleanup targets for 2005 and beyond, using results from a backlog characterization pilot currently underway and a state-based model that projects future cleanup results. In FY 2003, EPA clarified the terms “confirmed releases,” “cleanups initiated,” and “cleanups

completed” to address some states’ concerns about sites where they have determined no cleanup action is necessary to meet risk-based cleanup levels.

Finally, the most recent data available for municipal solid waste (MSW) recycling show that per capita generation of MSW is remaining stable at slightly less than 4.5 pounds daily, while increases in the rate

of recycling are not occurring as projected. Consequently, EPA is unlikely to reach its goal of 35 percent recycling by 2005 and is extending this goal to 2008. To help increase recycling, EPA will focus its RCC more strategically, targeting specifically the paper, plastics, packaging, and organics segments of the MSW stream. In addition, EPA recently launched its “Greenscapes” program to encourage

composting of food and yard wastes—organic materials representing over 25 percent of MSW—and using the compost to landscape roads, highways, golf courses, ski resorts, and industrial and institutional facilities.



GOAL 3: LAND PRESERVATION AND RESTORATION

Annual Performance Goals Met: **4**
 Annual Performance Goals Not Met: **0**
 Data Available After 11/5/04: **3**

FY2004 Obligations (in thousands):

EPA Total: \$10,155,381
 Goal 3: \$1,679,885
 Goal 3 Share of Total: 16.6%

FY2004 Costs (in thousands):

EPA Total: \$8,837,375
 Goal 3: \$2,021,672
 Goal 3 Share of Total: 22.9%

STRATEGIC OBJECTIVE: BY 2008, REDUCE ADVERSE EFFECTS TO LAND BY REDUCING WASTE GENERATION, INCREASING RECYCLING, AND ENSURING PROPER MANAGEMENT OF WASTE AND PETROLEUM PRODUCTS AND FACILITIES IN WAYS THAT PREVENT RELEASES. FY 2004 Cost (in thousands): \$228,653 (11.3% of FY 2004 Goal 3 Total Costs)

Progress Toward Strategic Objective: EPA waste management programs are on track to meet their obligations under the Agency's 2003 Strategic Plan. Although recycling rates are less than expected, EPA expects that the nation will meet the 2008 challenge of recycling 35% of municipal solid waste and generating a level of no more than 4.5 pounds per capita daily. The Resource Conservation and Recovery Act (RCRA) permitting program is making progress on the goal of attaining permits or approved controls at 95% of the permitted facilities, and is establishing a framework to ensure prompt permit renewals. More than 85% of the 2,751 hazardous waste management facilities nationwide have permits or approved controls. The underground storage tank program is on track with developing methods to monitor compliance, and the level of confirmed releases from tanks has already demonstrated a significant decline. The hazardous waste combustion program is successfully developing measures and controls to reduce hazardous waste combustion facility emissions of dioxins, furans and particulate matter.

APG 3.1 Municipal Solid Waste Source Reduction		Planned	Actual
FY 2004	Divert an additional 1% (for a cumulative total of 33% or 79 million tons) of municipal solid waste from land filling and combustion, and maintain per capita generation of RCRA municipal solid waste at 4.5 pounds per day.	79 M 4.5 lbs	Data avail 2006
FY 2003	Same Goal, different target.	74 M 4.5 lbs	Data avail 2005
FY 2002	Same Goal, different target.	69 M 4.5 lbs	Data avail 2004
FY 2001	Same Goal, different target. Goal Not Met.	67 M 4.3 lbs	68 M 4.4 lbs
FY 2004 Result: Municipal solid waste (MSW) recycling data for 2004 will be available in December 2006. The latest available data for year 2001 recycling, along with data from previous years, indicate that recycling continues to grow, but at a pace slower than anticipated. As a result, the Agency extended the time necessary for the nation to achieve the 35% recycling rate from 2005 to 2008 in the 2003 Strategic Plan. To increase the rate of recycling, EPA is directing its Resource Conservation Challenge (RCC) to strategically focus on particular segments of the MSW stream, specifically, paper, plastics, packaging, and organics. For example, to address one of the largest segments, paper, EPA is increasing its efforts with the American Forest and Paper Association to help reach its goal of recovering 55% of the paper consumed in the United States by 2012. In recent years, domestic paper recovery efforts have been severely strained by fierce competition in China where demand for recovered paper is at an all-time high. Data for exported waste are not available, so it is possible that part of the decline in recycling is due to exports rather than an increase in the percentage of waste landfilled or			

APG 3.1 Municipal Solid Waste Source Reduction (continued)

Planned

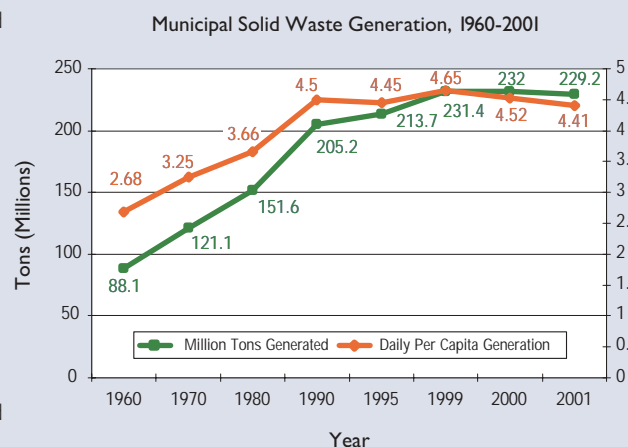
Actual

combusted. Furthermore, diversion of massive quantities of paper to China results in shuttering of paper-making capacity in the United States, leading to a reduction in industrial demand for recovered paper. In addition, EPA recently launched its "Greenscapes" program to foster the composting of food and yard wastes, which represent more than 25% of MSW, and the use of this compost for landscaping of roads, highways, golf courses, ski resorts, and industrial and institutional facilities. Per capita generation of MSW continues to be stable at slightly less than 4.5 pounds daily.

Data for the charts displayed available at <http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm>.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 30.

FY 2001 Result Available in FY 2004: Municipal solid waste diverted from landfilling and combustion exceeded expectations with a total of 68 million tons, but the per capita generation number did not decline to the expected level of 4.3 pounds per day.



APG 3.2 Manage Hazardous Waste and Petroleum Products Properly

Planned

Actual

FY 2004

Reduce releases to the environment by managing hazardous wastes and petroleum products properly.

Performance Measures:

—RCRA hazardous waste management facilities with permits or other approved controls.

2.4%

3.7%

—Confirmed UST releases nationally.

<10,000

Data avail 2004

—Increase in UST facilities in significant operational compliance with leak detection requirements.

4%

Data avail 2004

—Increase in UST facilities in significant operational compliance with spill, overfill and corrosion protection regulations.

4%

Data avail 2004

FY 2003

Increase the number of waste and petroleum facilities with acceptable or approved controls in place to prevent releases to the environment. **Goal Not Met.**

Performance Measures:

—Percent of RCRA hazardous waste management facilities with permits or other approved controls.

77.2%

83.2%

—Increase in UST facilities in significant operational compliance with leak detection requirements.

3%

-8%

—Increase in UST facilities in significant operational compliance with spill, overfill and corrosion protection regulations.

3%

-6%

FY 2002

75.8% of the hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, representing an average increase of 39 additional facilities per year. **Goal Met.**

75.8%

79.0%

FY 2001

Same Goal, different targets. **Goal Met.**

68%

74%

APG 3.2 Manage Hazardous Waste and Petroleum Products Properly (continued)

FY 2004 Result: In FY 2004 the RCRA permitting program exceeded its annual goal of 2.4% by establishing permits or approved controls at 103 of 2,752 facilities for an additional 3.7%. As a result, 87% of the 2,752 hazardous waste management facilities have permits or approved controls, meaning that the program has already exceeded its FY 2005 goal of 80%.

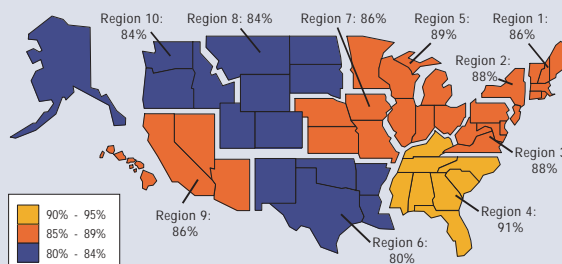
End-of-year performance data for the underground storage tank (UST) compliance program for FY 2004 will not be available until December 2004, but EPA does not anticipate that the goals for the two compliance measures will be met. As of mid-year FY 2004, the compliance rate for leak detection was 71%, or 5% below the target compliance rate of 76% at the end of the year. As of mid-year FY 2004, the compliance rate for release prevention was 77% or 6% below the target compliance rate of 83% at the end of the year. While these compliance rates are slightly lower than those in past reports, they are more accurate indicators of operational compliance since states are now following new EPA guidance (issued at the end of FY 2003) on what constitutes operational compliance. These compliance rates represent a snapshot in time. Some UST facilities that are compliant one year may be out of compliance the following year.

For FY 2004, states and regional offices reported the percent of UST facilities in operational compliance with release prevention requirements, release detection requirements, and both requirements together. For the combined measure, EPA established a goal of increasing the compliance rate by 1% per year from FYs 2005–FY 2008. This is a reasonable goal since constant vigilance is required to ensure facilities remain in significant operational compliance. Even maintaining existing compliance rates will require effort by EPA and its state partners. FY 2004 is the baseline year for the combined compliance rate measure. At the mid-year FY 2004, the combined compliance rate was 62%. The decline in confirmed releases of underground storage tanks between FY2003 and the first half of FY 2004 demonstrates the effectiveness of state efforts to implement improved release detection and prevention requirements. In the first half of FY 2004, there were only 4,185 confirmed releases, 50% fewer than in the first half of FY 2003.

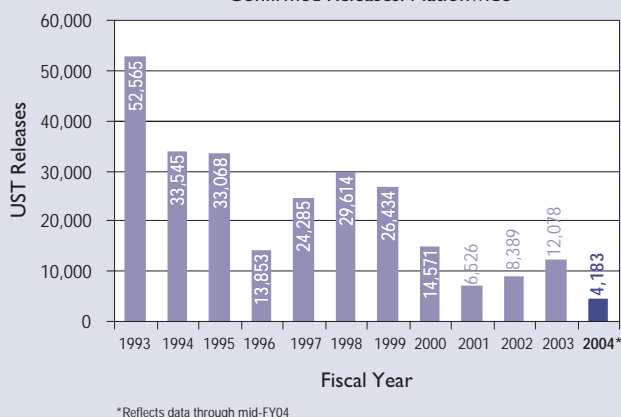
A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 30-31.

FY 2003 Result Available in FY 2004: In FY 2003, EPA did not meet its goal to increase by 3% to 80% for the leak detection requirements or to increase by 3% to 85% for the spill, overfill and corrosion protection requirements. The final compliance rates for FY 2003 were 72% (or 8% less than the target of 80%) for UST facilities in significant operational compliance with leak detection requirements, and 79% (or 6% less than the target of 85%) for UST facilities in significant operational compliance with spill, overfill and corrosion protection. Although the Agency has been working with the states to improve their reporting of both measures, the compliance rates for both have been steady or declining. Several reasons could explain this trend: some states have more stringent requirements; some states target non-compliant UST facilities for inspection that are not representative of state sampling; and the compliance rates represent a snapshot in time so that some UST facilities which are compliant 1 year may be out of compliance the following year; thus compliance rates appear low.

RCRA Permitting Progress
—Progress Toward the FY 2005 Goals
(National Results: 87%)



Confirmed Releases: Nationwide



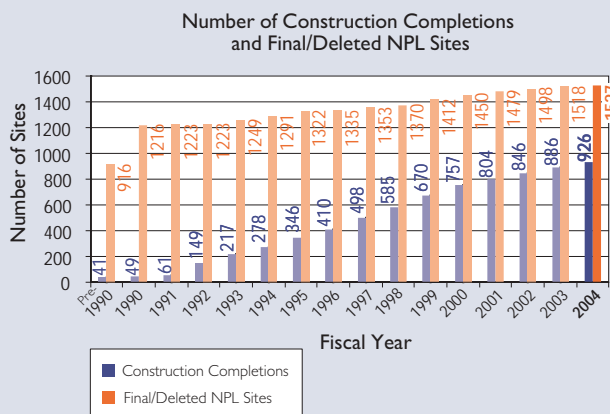
STRATEGIC OBJECTIVE: By 2008, CONTROL THE RISKS TO HUMAN HEALTH AND THE ENVIRONMENT BY MITIGATING THE IMPACT OF ACCIDENTAL OR INTENTIONAL RELEASES AND BY CLEANING UP AND RESTORING CONTAMINATED SITES OR PROPERTIES TO APPROPRIATE LEVELS. FY 2004 Cost (in thousands): \$1,736,294 (85.9% of FY 2004 Goal 3 Total Costs)

Progress Toward Strategic Objective: EPA cleanup programs have made considerable progress meeting their commitments. Superfund and the RCRA corrective action programs are also striving to attain indicators that demonstrate protection of

human health and the environment, and to clean up contamination at designated sites and facilities. Through the end of FY2004, EPA had assessed more than 45,000 sites and completed final cleanup plans at more than 1,100 Superfund baseline sites. In addition, more than 33,000 sites have been removed from the CERCLIS waste site list since the beginning of the program indicating they would be addressed by other authorities, they were clean or that no additional federal action was required. Deleting sites is a helpful step in promoting the economic redevelopment of these properties. Also, the Superfund Program cleaned up or had construction underway at 94% (1,442) of the 1,529 sites on the final NPL (includes final and deleted sites). Of these 1,529 sites, 926, or nearly 61%, have cleanup construction completed. Construction projects are ongoing at more than 346 NPL sites. In the course of construction since the Superfund program began, EPA has treated or removed 1 billion cubic yards of hazardous solid waste and addressed 381 billion gallons of hazardous liquid waste (including contaminated groundwater). At the close of FY 2004, nearly 83% (1,242 of 1,494) of baseline Superfund sites had human exposures under control, meaning that adequately protective controls are in place to prevent any unacceptable human exposures from occurring under current land and groundwater use. In addition, the migration of contaminated groundwater was under control at nearly 67% (875 of 1,306) of baseline Superfund sites by the close of FY 2004. In addition to cleanup activities, EPA has accomplished this protection of human health since the program's inception by: (1) providing alternative drinking water supplies to nearly 615,000 people at NPL and non-NPL sites to protect them from contaminated ground and surface water, and (2) relocating more than 45,000 people at NPL and non-NPL sites in instances where contamination posed the most severe immediate threats. Meeting ambitious cleanup goals continues to be a challenge for the leaking underground storage tank (LUST) program. The rate of LUST cleanups has been declining in recent years, and available data suggest that the program will not meet its 2008 goals. Efforts are currently underway to identify opportunities for program improvement and create a new model for establishing future LUST cleanup targets.

APG 3.3 Assess and Clean Up Contaminated Land		Planned	Actual
FY 2004	Control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse. <i>Performance Measures:</i> —Superfund final site assessment decisions. —Superfund construction completions. —Superfund hazardous waste sites with human exposures controlled. —Superfund hazardous waste sites with groundwater migration controlled. —Final remedies (cleanup targets) selected at Superfund sites. —High priority RCRA facilities with human exposures to toxins controlled. —High priority RCRA facilities with toxic releases to groundwater controlled. —LUST cleanups completed.	500 40 10 10 20 166 129 21,000	548 40 15 18 30 195 150 Data avail 2004
FY2003	Assess waste sites. <i>Goal Met.</i> <i>Performance Measures:</i> —Number of Superfund final site assessment decisions. —Number of Superfund removal response actions initiated.	475 275	917 380
FY 2003	Clean up and reduce risk at waste sites. <i>Goal Not Met.</i> <i>Performance Measures:</i> —Number of Superfund construction completions. —Number of Superfund hazardous waste sites with human exposures (HE) controlled.	40 10	40 28

APG 3.3 Assess and Clean Up Contaminated Land <i>(continued)</i>		Planned	Actual
FY 2003 <i>(continued)</i>	—Number of Superfund hazardous waste sites with groundwater migration controlled.	10	54
	—Number of high priority RCRA facilities with human exposures to toxins controlled.	197	230
	—Number of high priority RCRA facilities with toxic releases to groundwater controlled.	158	175
	—Number of leaking underground storage tank (LUST) cleanups completed.	21,000	18,518
Superfund Cleanup			
FY 2002	EPA and its partners will complete 40 Superfund cleanups (construction completions). Goal Met.	40	42
FY 2001	Same Goal, different targets. Goal Not Met.	75	47
RCRA Corrective Actions			
FY 2002	172 (for a cumulative total of 995 or 58%) of high priority RCRA facilities will have human exposure (HE) controlled and 172 (for a cumulative total of 882 or 51%) of high priority RCRA facilities will have groundwater releases (GWR) controlled. Goal Met.	172 HE 172 GWR	205 HE 171 GWR
FY 2001	Same Goal, different targets. Goal Not Met.	172 HE 172 GWR	179 HE 154 GWR
Leaking Underground Storage Tank Cleanups			
FY 2002	EPA and its partners will complete 22,000 LUST cleanups for a cumulative total of approximately 290,000 cleanups since 1987. Goal Not Met.	22,000	15,769
FY 2001	Same Goal, different targets. Goal Not Met.	21,000	19,074
<p>FY 2004 Result: In FY 2004, the Superfund program improved public health through response activities that reduced current, direct human exposures to hazardous pollutants. The program achieved its target of 40 construction completions, and surpassed targets for all other goals. At the close of FY 2004, more than 83% (1,242 of 1,494) of baseline sites had human exposures under control, meaning that adequately protective controls are in place to prevent any unacceptable human exposures from occurring under current land and groundwater use. In addition, the migration of contaminated groundwater was under control at nearly 67% (875 of 1,306) of baseline sites by the close of FY 2004. EPA has accomplished this protection of human health since the program's inception by: (1) providing alternative drinking water supplies to nearly 615,000 people at NPL and non-NPL sites to protect them from contaminated and surface water; and (2) relocating more than 45,000 people at NPL and non-NPL sites in instances where contamination posed the most severe immediate threats.</p> <p>EPA is unlikely to meet its FY 2004 target of completing 21,000 LUST cleanups, and reducing the national LUST cleanup backlog of 132,000 to 66,000 by FY 2008. EPA has established a range for the annual national cleanup goal of 18,000 to 23,000 cleanups to encourage state progress in reducing the cleanup backlog in half. It has, however, been more difficult for the states and regional offices</p>			



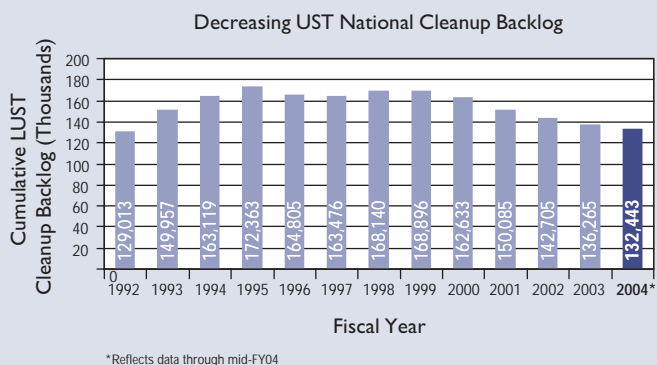
APG 3.3 Assess and Clean Up Contaminated Land (continued)

to meet these goals because of the increasing complexities with the remaining backlog of cleanups and MTBE contamination. In the first half of FY 2004, EPA and its partners were able to complete more than 8,000 cleanups¹² and reduce the cleanup backlog to 132,443. The completion of fewer cleanups will potentially result in extended impacts to the environment and natural resources and delay functional re-use of the land or resources.

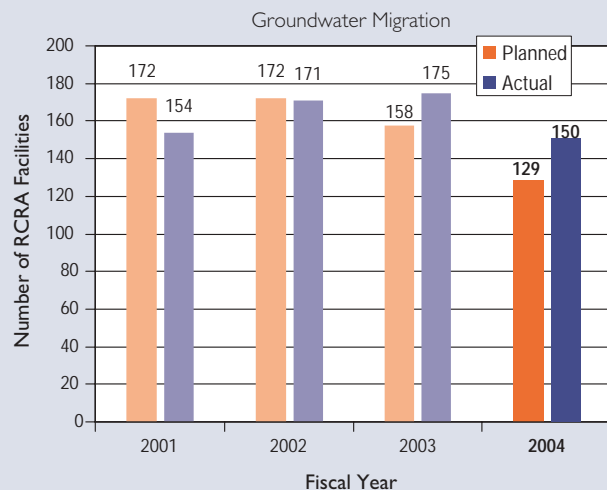
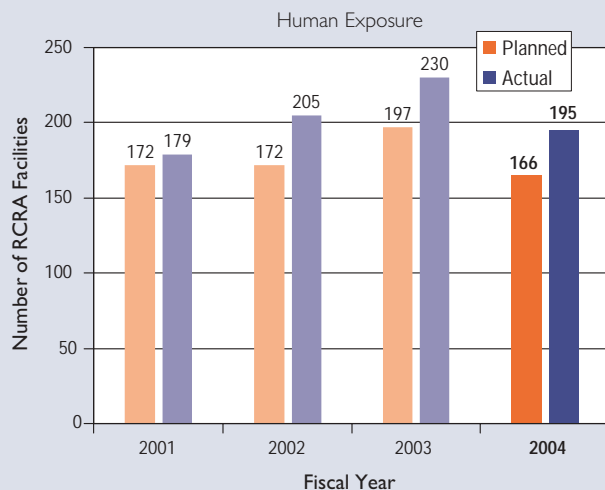
The RCRA corrective action program also met its goals, and has reported documentation of controlled human exposures at 195 sites (annual goal of 166) and groundwater migration at 150 sites (annual goal of 129). Cumulatively, the program has controlled human exposures at 84% (1,440) of 1,714 high-priority RCRA sites, and groundwater migration at 70% of these sites (1,199).

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 31-32.

FY 2003 Result Available in FY 2004: EPA did not meet the FY 2003 goal of completing 21,000 cleanups at leaking underground storage tank sites; 18,518 cleanups were completed. The reasons for not meeting this goal are the same as those discussed above for FY 2004.



RCRA Environmental Indicators



APG 3.4 Superfund Potentially Responsible Party Participation

Planned

Actual

FY 2004

Reach a settlement or take an enforcement action by the start of remedial action at 90% of those Superfund sites having known non-Federal, viable, liable parties. **Goal Met.**

90%

98%

FY 2004 Result: In FY2004, EPA reached a settlement or took an enforcement action by the start of remedial action at more than 98% of those Superfund sites having known non-Federal, viable, liable parties, and achieved its goal. Settlements or enforcement actions include: Consent Decree (CD), Administrative Order on Consent (AOC), Consent Agreement (CA), Unilateral Administrative Order (UAO), voluntary cost recovery action, or litigation referral.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 31-32.

APG 3.5 Superfund Cost Recovery		Planned	Actual
FY 2004	Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than \$200,000. Goal Met.	100%	100%
FY 2003	Same Goal. Goal Met.	100%	100%
FY 2002	Same Goal. Goal Met.	100%	100%
FY 2001	Same Goal. Goal Not Met.	100%	97.8%

FY 2004 Result: EPA achieved its goal of addressing, through enforcement, settlement or compromise/write-off, all of the pending cost recovery cases with outstanding unaddressed past costs greater than \$200,000 and pending statute of limitations (SOL) concerns. In FY 2004, EPA addressed cost recovery actions at 183 NPL and non-NPL sites, of which 84 had total past costs greater than or equal to \$200,000 and potential SOL concerns. EPA secured cost recovery commitments valued at \$157.4 million.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 31-32.

Cumulative Response and Cost Recovery Settlements

Fiscal Year	Cleanup	Cost Recovery	Total
1981	0.0	0.0	0.0
1983	0.1	0.0	0.1
1985	0.5	0.0	0.5
1987	1.0	0.1	1.1
1989	2.5	0.2	2.7
1991	4.5	0.3	4.8
1993	6.5	0.4	6.9
1995	8.5	0.5	9.0
1997	10.5	0.6	11.1
1999	12.5	0.7	13.2
2001	14.0	0.8	14.8
2003	15.0	0.4	15.4

APG 3.6 Prepare for and Respond to Accidental and Intentional Releases		Planned	Actual
FY 2004	Reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our nation's capability to prepare for and respond more effectively to these emergencies. Goal Met.		
	Performance Measures:		
	—Superfund removal response actions initiated.	350	385
	—Oil spills responded to or monitored by EPA.	300	308
	—Percentage of emergency response and homeland security readiness improvement.	10%	56%
FY 2003	Improve homeland security response readiness and continue assessment of critical facility vulnerability. Goal Not Met.		
	Performance Measures:		
	—Develop baseline data for response readiness, incorporation of Homeland Security into community contingency plans, and critical facilities requiring vulnerability assessments.	Baseline data	823 (Baseline)
	—Number of oil facilities in compliance with spill prevention, control and countermeasure provisions of oil pollution prevention regulations.	600	525
FY 2002	Respond to or monitor 300 significant oil spills in the inland zone. Goal Met.	300	322

APG 3.6 Prepare for and Respond to Accidental and Intentional Releases (continued)

FY 2004 Result: EPA continues to respond to or monitor oil spills to prevent oil discharges into the nation's inland waterways as stated in the National Contingency Plan. In FY 2004 EPA initiated 385 removal cleanup actions at hazardous waste sites to reduce immediate threats to human health and the environment, for a total of 8,286 removal actions over the life of the program. EPA was also involved in 308 oil spill response actions. As part of the National Response System, EPA ensures that inland oil spills are evaluated and addressed by the local, state, or tribal government or by the responsible party, and serves as the "safety net" for those responses that are beyond the capabilities of those other agencies. EPA receives approval from the Coast Guard for use of the oil spill trust fund administered by National Pollution Funds Center. A readiness performance measure for core emergency response programs was established in FY 2003 that will prove a useful management tool in assuring the Agency's ability to respond to simultaneous large scale emergencies resulting from accidental or intentional uncontrolled releases. In FY 2004 EPA exceeded its target of 10% by reducing the deficit of core emergency response readiness 56%. The program will maintain high degrees of readiness for the foreseeable future. Efforts are ongoing with facility response plan and risk management plan evaluation that demonstrate the effectiveness of safeguards in place.

A description of the quality of the data used to measure EPA's performance can be found in Appendix B, pages 31-33.

STRATEGIC OBJECTIVE: PROVIDE AND APPLY SOUND SCIENCE FOR PROTECTING AND RESTORING LAND BY CONDUCTING LEADING-EDGE RESEARCH AND DEVELOPING A BETTER UNDERSTANDING AND CHARACTERIZATION OF THE ENVIRONMENTAL OUTCOMES UNDER GOAL 3. FY 2004 Cost (in thousands): \$56,726 (2.8% of FY 2004 Goal 3 Total Costs)

Progress Toward Strategic Objective: To meet this objective, EPA is providing important information on monitored natural recovery as a remedy for contaminated sediments at Superfund sites. EPA is also providing information on the performance of an innovative treatment technology that can destroy or remove PCBs from contaminated river sediment, and result in a product with beneficial reuse. Specifically, this process treats river sediment impacted by PCBs, other organics, and metals by melting the sediment at nearly 3,000 degrees, destroying the contaminants and producing a glass aggregate that can be used as an additive to concrete, a material in floor tiles, and construction fill.¹³

APG 3.7 Scientifically Defensible Decisions for Site Clean-up		Planned	Actual
FY 2004	<p>Provide risk assessors and managers with site-specific data sets on 3 applications detailing the performance of conventional remedies for contaminated sediments to help determine the most effective techniques for remediating contaminated sites and protecting human health and the environment. Goal Met.</p> <p><i>Performance Measure:</i></p> <p>Reports on performance data for conventional sediment remedies for three sites.</p>	3 reports	3 reports
FY 2003	<p>To ensure cost-effective and technically sound site clean-up, deliver state-of-the-science reports and methods to EPA and other stakeholders for risk management of fuel oxygenates; organic and inorganic contamination of sediments, groundwater and/or soils; and oil spills. Goal Met.</p> <p><i>Performance Measure:</i></p> <p>Complete draft of the FY 2002 Annual Superfund Innovation Technology Evaluation (SITE) Report to Congress.</p>		

APG 3.7 Scientifically Defensible Decisions for Site Clean-up (continued)		Planned	Actual
FY 2002	<p>Provide at least 6 innovative approaches that reduce human health and ecosystem exposures from dense non-aqueous phase liquids and methyl-tertiary butyl ether in soils and groundwater, and from oil and persistent organics in aquatic systems. Goal Met.</p> <p>Performance Measure:</p> <p>Deliver the Annual SITE Program Report to Congress detailing 4-6 innovative approaches, their cost savings and future direction; reports summarizing pilot scale evaluation of in situ remedies for solvents.</p>		
FY 2001	<p>Provide technical information to support scientifically defensible and cost-effective decisions for cleanup of complex sites, hard-to-treat wastes, mining, oil spills near shorelines, and Brownfields to reduce risk to human health and the environment. Goal Not Met.</p> <p>Performance Measure:</p> <p>Deliver the Annual SITE Program Report to Congress.</p>		0
<p>FY 2004 Result: In FY 2004 EPA completed and submitted for publication 3 reports describing the performance of conventional remedies for contaminated sediments for use by remedial project managers in determining the feasibility of various remedial approaches. These reports will help reduce the uncertainty associated with remedy selection and identify the methods that efficiently chart remedy performance over time. EPA's reports respond to a National Research Council report recommending that "long-term monitoring and evaluation of PCB-contaminated sediment sites should be conducted to evaluate the effectiveness of the management approach and to ensure adequate continuous protection of humans and the environment."¹⁴</p> <p>A description of the quality of the data used to measure EPA's performance can be found in Appendix B, page 33.</p>			

**ASSESSMENT OF IMPACTS OF FY 2004 PERFORMANCE ON FY 2005 ANNUAL PLAN:
THE GOAL HIGHLIGHTS PRECEDING THE FY 2004 PERFORMANCE RESULTS PROVIDE A DISCUSSION OF
CHANGES AND DIRECTIONS FOR THE FUTURE OF SEVERAL PROGRAMS.**

FY 2003 Annual Performance Goals

(No Longer Reported for FY 2004)

- Oil facilities in compliance with spill prevention, control and countermeasure provisions of oil pollution prevention regulations.
- Maximize all aspects of potentially responsible party (PRP) participation which includes maximizing PRP work at 70% or the new remedial construction starts at non-Federal facility Superfund sites, and emphasize fairness in the enforcement process.

NOTES

- 1 Statutory authorities can be found in the FY 2004 Annual Performance Plan and Congressional Justification <http://www.epa.gov/ocfopage/budget/2004/g05final.pdf>.
- 2 U.S. EPA, Office of Solid Waste and Emergency Response. *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*. (OSWER 9355.0-85 Draft). Washington DC. (2004)
- 3 U.S. EPA, Office of Research and Development. *The Superfund Innovative Technology Evaluation Program: Annual Report to Congress FY 2002*. (EPA/540/R-03/502). Washington DC: Government Printing Office. (2004). For more information about EPA's SITE program, see <http://www.epa.gov/ORD/SITE/>
- 4 General information for the revitalization program is found at <http://www.epa.gov/swerrims/landrevitalization/index.htm>.
- 5 For more information on the EPA/Pennsylvania agreement, go to <http://www.epa.gov/reg3hwmd/newsletters/2004-04-21.htm>.
- 6 For additional information, refer to June 21, 2004 OSWER/Federal Facilities Restoration and Reuse Office documents: Federal Environmental Work Group issue papers entitled RCRA/CERCLA Overlap, Joint Mine Waste Repository, and Lead Agency Designation (June 21, 2004).
- 7 Additional information on the One Cleanup Program may be found at <http://www.epa.gov/oswer/onecleanupprogram/index.htm>.
- 8 U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. February 2004. *Resource Conservation Challenge: A Year of Progress*. EPA530-R-04-001. Washington, D.C. Available at <http://www.epa.gov/epaoswer/osw/conserved>. Priority chemicals activities discussed in Goal 5 are an important component of the RCC partnership. Additional information on the Resource Conservation Challenge may be found at <http://www.epa.gov/epaoswer/osw/conserved>.
- 9 Refer to *Sustained Progress in Addressing Management Issues* available at <http://www.epa.gov/ocfo/finstatement/2004ar/2004ar.htm>.
- 10 Links to various reports and workgroups may be accessed at the Superfund cleanup program's main site <http://www.epa.gov/superfund/>.
- 11 Memorandum from Cliff Rothenstein, Director, EPA Office of Underground Storage Tanks to Underground storage Tanks/Leaking Underground Storage Tanks Division Directors in EPA Regions 1-10, May 13, 2004, "Semi Annual (Mid-Year) Activity Report."
- 12 Memorandum from Cliff Rothenstein, Director, EPA Office of Underground Storage Tanks to Underground storage Tanks/Leaking Underground Storage Tanks Division Directors in EPA Regions 1-10, May 13, 2004, "Semi Annual (Mid-Year) Activity Report."
- 13 U.S. Environmental Protection Agency, Office of Research and Development. March 2004. *Minergy Corporation Glass Furnace Technology Evaluation; Innovation Technology Evaluation Report*. EPA 540/R-03/500. Cincinnati, OH. Available at <http://www.epa.gov/ORD/SITE/reports/540r03500/540r03500.html>.
- 14 National Research Council. *A Risk Management Strategy for PCB-Contaminated Sediments*. 2001. National Academy Press. Washington, DC.